STEEP SLOPE PERMIT APPLICATION

Incorporated Village of Northport
Planning Board
224 Main Street
Northport, NY 11768

1. **Identification of Owner**

Name: _____ Phone:_____

Address: _____

2. **Identification of Applicant, if different than owner**

Name: _____ Phone:_____

Address: _____

3. **Identification of Professional preparing plan**

Name: _____ Phone:_____

Address: _____

4. **Identification of Property**

Name or title, if any: _____

Address: _____

Tax Map #: Section: _____ Block: _____ Lot: _____

Zoning District:_____

Total area of property (in square feet): _____

Is the property the subject of a pending site plan or subdivision application?:
Yes ❑ No ❑

Is the property within 500 feet of the bounds of the Village? :Yes ❑ No ❑

Does the property abut coastal lands or wetlands? : Yes ❑ No ❑

5. **SITE PLAN**

Attach ten (10) copies of a site plan complying with all the requirements of Chapter 219-28 of the Code of the Village and as set forth in the attached information sheet.

Are you seeking a waiver of any of the requirements of this application? (see information sheets for requirements, pages 4 &5) :

Yes ❑ No ❑

If yes, then explain the nature and basis for such waiver:

_____

_____

_____

_____

6. **FEES**

Payment of initial of $250.00 filing fee, plus reimbursement of all contracted engineering review costs incurred by the Village, to be paid in full prior to a determination on the permit application.

7. **STATEMENT OF INTENT**

The applicant requests that the Planning Board approve the issuance of a Steep Slope Permit under Chapter 219 of the Code of the Village. The applicant is proposing the following:

_____

_____

_____

Permission is hereby granted to the Village, its agents, servants and employees to enter upon the above described property for the purposes incidental to the inspection of the property as necessary in connection with the processing and review of the within application, with such inspections to be at reasonable times and upon reasonable notice to the owner or tenant in possession.

All applications shall be signed by the owner of the property affected by this application and by the applicant, if other than the owner.

_____	_____
Signature of Owner Date	Signature of Applicant Date
_____	_____
Name of Owner (Please print)	Name of Applicant (Please print)

For office use only

Date rec'd _____

Date of decision _____

Permit # _____

Information Sheet for Steep Slope Permit Application

Unless expressly waived by the Village, the application shall include all of the following:

1. Ten (10) copies of a site plan drawn at a scale of not less than one (1) inch equals thirty (30) feet, prepared by an professional engineer, land surveyor, architect, or landscape architect licensed by the State of New York, showing within the lot or lots containing the following:

    (a) Proposed location of major buildings, including drainage, septic systems, wells and driveways.

    (b) The location of the proposed area of disturbance and its relation to adjacent properties, together with buildings, structures, roads, affected wetlands and affected trees, if any, within 100 feet of the boundaries of said area. An inset map at a reduced scale may be used if required by the Planning Board.

    (c) Existing topography of the proposed area of disturbance at a contour interval of not more than two (2) feet. Contours shall be shown for a distance of fifty (50) feet or greater beyond the limits of the proposed area of disturbance, if determined necessary by the Planning Board, in order to fully evaluate the application.

    (d) Proposed final contours and proposed surface materials or treatment at a maximum contour interval of two (2) feet.

    (e) Existing topography of the area to be disturbed and the entire watershed tributary to said area presented at a scale of not more than one hundred (100) feet per inch. This map shall show existing and, if required by the Planning Board, proposed controls and diversions of upland water.

    (f) The details of any surface or subsurface drainage system proposed to be installed, including special erosion control measures, designed to provide for proper surface or subsurface drainage, both during the performance of the work and after its completion.

    (g) The cut/fill map delineating proposed areas of disturbance at affected depths in feet of 0-3, 3-6, 6-10, and 10 and over.

(h) Any special reports deemed necessary by the Planning Board to evaluate the application, including but not limited to geologic or hydro-geologic studies.

2. A written narrative explaining the nature of the proposal, including any future development proposals for the property and whether alternative locations exist for the proposed activity. Note: include any photographs which may assist in the description of the proposal.

3. The applicant shall furnish the following documents with this form:

   (a) Deed and any easements and/or covenants and restrictions of record

   (b) Proof of ownership

4. Attached to this form are the following:

   (a) Article V: Construction on Steep Slopes

   (b) NYS Standards and Specifications for Erosion and Sediment Control

*If the subject property falls within 1000 feet of the mean high water mark, a SEQRA review may be required.

ARTICLE V, Construction on Steep Slopes [Added 11-6-2002 by L.L. No. 17-2002[EN(1)]]

§ 219-25. Intent and purpose.

It is the purpose of this article to control construction on steep slopes. This article is intended to regulate individual and subdivided lots to protect the health, safety and welfare of the general public by maintaining and protecting the natural terrain, waterways, wetlands and vegetative features, providing safe building sites by preventing surface erosion, creep and sudden slope failure, protecting important scenic views and vistas; preventing flooding, runoff and preserving areas of wildlife habitat. Toward this end, whenever possible, construction shall avoid disturbing such areas and existing vegetation thereon.

§ 219-26. Definitions.

As used in this article, the following terms shall have the meaning indicated:

DISTURBANCE -- Preparing land for construction, such as clearing, grading and filling or the building of structures, including driveways and retaining walls.

STEEP SLOPES -- Ground areas with a minimum slope of 10% or greater with a minimum area of 100 square feet and a minimum horizontal distance of 10 feet.

§ 219-27. Permit required; exempt activities.

A. It shall be unlawful to create any disturbance, other than an exempt activity as set forth in this article, on any steep slope located within any existing or proposed lot or lots in the Village, unless and until a steep slope permit is granted by the Planning Board pursuant to the requirements of this article.

B. Exempt activities. The following activities on steep slopes do not require the issuance of a steep slope permit:

   (1) Any planting of landscape materials which does not require disturbance of existing terrain.

   (2) Emergency situations, as determined by the Village Engineer, where the disturbance of steep slopes is required to protect persons, wildlife or property from imminent danger.

§ 219-28. Permit procedure.

A. The Planning Board is hereby designated to administer and implement this article by granting or denying steep slope permits for all residential and commercial construction whether on a single lot or in connection with a subdivision application.

B. An application for a steep slope permit shall be made on forms furnished by the Planning Board and shall include the following information:

(1) Seven copies of a site plan drawn at a scale of not less than one inch equals 30 feet, prepared by an engineer, landscape architect, or surveyor licensed by the State of New York, showing within the lot or lots containing steep slopes the following:

(a) The proposed location of all structures, including drainage, septic system, wells and driveways.

(b) The location of the proposed area of disturbance and its relation to adjacent properties, together with buildings, structures, roads, affected trees and affected wetlands, if any, within 100 feet of the boundaries of said area. An inset map at a reduced scale may be used if required by the Planning Board.

(c) Existing topography of the proposed area of disturbance at a contour interval of not more than two feet. Contours shall be shown for a distance of 50 feet or greater beyond the limits of the proposed area of disturbance, if determined necessary by the Planning Board, in order to fully evaluate the application.

(d) Proposed final contours and proposed surface materials or treatment at a maximum contour interval of two feet.

(e) Existing topography of the area proposed to be disturbed and the entire watershed tributary to said area presented at a scale of not more than 100 feet per inch. This map shall show existing and, if required by the Planning Board, proposed controls and diversions of upland water.

(f) The details of any surface or subsurface drainage system proposed to be installed, including special erosion control measures, designed to provide for proper surface or subsurface drainage, both during the performance of the work and after its completion.

(g) The cut/fill map delineating proposed areas of disturbance at affected depths in feet of zero to three, three to six, six to 10, and 10 and over.

(h) Any special reports deemed necessary by the Planning Board to evaluate the application, including but not limited to geologic or hydrogeologic studies.

(2) A written narrative explaining the nature of the proposal, including any future development proposals for the property and whether alternative locations exist for the proposed activity.

C. Village Engineer review. The Planning Board may refer each application for a steep slope permit to the Village Engineer for review, who shall submit a written report to the Planning Board. This report shall contain the following items:

(1) A recommendation on whether the submission is complete and contains sufficient information for the Planning Board to perform a proper review of the submission.

(2) A recommendation of approval, disapproval or approval with conditions of the application.

(3) A recommendation as to the amount of a performance bond to be posted to guarantee completion of the work, including stabilization or restoration of the area of disturbance.

D. During its review of the application, the Planning Board shall:

(1) Determine when an application is complete.

(2) Review the application to determine that the requirements of this article have been satisfied.

(3) Review each complete application and approve, approve with conditions or deny the application, in accordance with this article, within 60 days of the receipt of a complete application as determined by the Planning Board.

(4) If deemed necessary, require posting of a performance bond or other security as a condition of approval, the amount of such bond or other security to be approved by the Village Board of Trustees.

E. Public hearing. The Planning Board may, at its discretion, hold a public hearing on an application for a steep slope permit. If a public hearing is held, the notice and hearing requirements shall follow the procedural requirements set forth in this chapter.

F. In granting a steep slope permit, the Planning Board shall find that the following conditions have been met.

(1) The proposed activity is in accordance with the legislative intent and purpose stated in this article.

(2) The proposed activity will not result in creep, sudden slope failure or additional erosion.

(3) The proposed activity will preserve and protect existing waterways, floodplains and wetlands.

(4) The proposed activity will not adversely impact existing or proposed drainage structures, wells or sewage disposal systems.

(5) The proposed activity will not adversely impact any endangered or threatened species of flora or fauna.

G. After a steep slope permit is approved:

(1) All permits shall expire on completion of the work specified therein and approved thereby. Unless otherwise indicated, the approved permit shall be valid for a period of one year from the date of issuance. The Planning Board may grant a six-month extension of this period.

(2) Following completion of the work, the applicant shall submit a certification by an engineer, licensed by the State of New York, that the completed work meets the requirements of the permit. The Building Inspector shall verify that the work has been completed in accordance with the permit. An as-built survey or plan shall be required to show that the work was completed in accordance with the permit.

(3) Where the activity subject to this article also requires a Village building permit, the Building Inspector shall not issue a certificate of compliance, completion or occupancy until the Building Inspector verifies that all work has been completed in accordance with the permit and the Planning Board approves such report.

(4) Any proposed revision to work covered by a steep slope permit may be reviewed by the Village Engineer. Where the Village Engineer or Planning Board determines that a substantial revision is required, a new application to the Planning Board is required.

§ 219-29. Penalties for offenses; corrective action.

A. In addition to the penalties for offenses and additional remedies set forth in this chapter, any person found violating any provision of this article or conditions imposed by Planning Board approval shall be served with a written notice by the Building Inspector stating the nature of the violation and ordering the person to cease and desist therefrom.

B. Whenever any person shall have been notified, in writing, by the enforcement officer that the person is violating the provisions of this article or of any permission or extension thereof issued hereunder or has been served with a summons accusing the person thereof, each day the person shall continue such violation after such notification or service shall constitute a separate offense punishable by a like fine or penalty as set forth in this chapter.

C. The foregoing provisions for the enforcement of this article are not exclusive but are in addition to any and all laws and regulations applicable thereto.

§ 219-30. Effect on existing operations or construction.

Any construction commenced within areas defined as steep slopes prior to the effective date of this article shall be exempt from this article, provided that no new construction shall be permitted after the effective date of this article except by permit as provided hereby.

§ 219-31. Other approvals deemed a permit.

A. Approved subdivisions deemed a steep slope permit. Where the Planning Board has approved, with or without conditions, a final construction plan and final subdivision plan for a proposed subdivision, this approval shall be deemed to be a duly issued steep slope permit, provided that the following conditions have been satisfied:

   (1) All of the information, review, bonding, approval and other requirements of this article have been met.

   (2) The Planning Board may attach special conditions to the approval of the final construction plan and the final subdivision plan to ensure that the construction within steep slopes occurs as approved.

B. Approved site plans deemed a steep slope permit. Where the Planning Board has approved, with or without conditions, a final site plan for a proposed development, this approval shall be deemed to be a duly issued steep slope permit, provided that the following conditions have been satisfied:

   (1) All of the information, review, bonding, approval and other requirements of this article have been met.

   (2) The Planning Board may attach special conditions to the approval of the final site plan to ensure that the construction within steep slopes occurs as approved.

ARTICLE VI, Enforcement [Added 4-17-1979 by L.L. No. 5-1979]

§ 219-32. Penalties for offenses. [Amended 8-7-1984 by L.L. No. 8-1984; 8-17-1999 by L.L. No. 12-1999]

Each violation of this chapter, any regulation, order or ruling promulgated hereunder or of any permit issued hereunder shall constitute a misdemeanor and shall be punishable by a fine of not $1,000 or by imprisonment not exceeding one year, or by both such fine and imprisonment; and

each day such violation shall be permitted to exist shall constitute a separate offense. The giving of written notice is not a prerequisite for action under this section unless the subject of the prosecution is for noncompliance with such notice.

§ 219-33. Additional remedies.

In the event of any actual or impending violation of this chapter, the Board of Trustees, in addition to other remedies, may institute any appropriate action or proceedings to prevent, restrain, correct or abate such violation.

§ 219-34. Severability. [Added 11-6-2002 by L.L. No. 17-2002]

If any clause, sentence, paragraph, subdivision, section or other part of this chapter shall for any reason be adjudged by any court of competent jurisdiction to be unconstitutional or otherwise invalidated, such judgment shall not affect, impair or invalidate the remainder of this chapter, and it shall be construed to have been the legislative intent to enact this chapter without such unconstitutional, unlawful or invalid parts therein.

Endnotes

1 (Popup)
Editor's Note: This local law also repealed former Art. V, Hillside Development Areas, added 3-1-1977 by L.L. No. 5-1977, as amended.

RESOURCES

There is a great deal of information and resources available to help MS4s and construction operators develop effective Stormwater Management Programs and Stormwater Pollution Prevention Plans. Below are some suggestions on where to start.

Web Sites

http://www.dec.state.ny.us/water/stormwater - The Department of Environmental Conservation (DEC) web site. It has a wealth of information about the federal regulation and how it is being implemented in New York State.

http://www.epa.gov/npdes/stormwater - This is the EPA's website on stormwater.

Stormwater Reference Manuals

Title: The following **NYS Management Practice Catalogs** pertain to the control or prevention of nonpoint source pollution from stormwater runoff:
- **Construction**
- **Roadway and Right-Of-Way Maintenance**
- **Urban/Stormwater Runoff**

Useful to: Planners, engineers, local officials, MS4s, contractors, land developers, property owners

Purpose: Structural, vegetative or operational practices that can be used as appropriate to control or prevent pollution from runoff

Format: Printed copies are available for free.

Availability: NYSDEC-Division of Water, Telephone: (518) 402-8250.
E-mail: thboekel@gw.dec.state.ny.us

Title: **New York State Standards and Specifications for Erosion and Sediment Control** (Previously titled, *New York Guidelines for Urban Erosion and Sediment Control,* and known as the "Blue Book")

Useful to: Planners, engineers, local officials, MS4s, contractors, land developers, property owners

Purpose: Provides the Department's standards and specifications for the design of erosion and sediment control practices.

Availability: The first version is currently available for purchase. The order form can be down loaded at: http://www.dec.state.ny.us/website/dow/swmanual/swcsorderform_v1.pdf. Or, call Lisa Miller at the Cayuga County Soil and Water Conservation District: (315) 252-4171.

Title: **New York State Stormwater Management Design Manual**

Useful to: Planners, engineers, local officials, MS4s, contractors, land developers, property owners

Purpose: Contains the Department's standards and specifications for the design of post-construction water quantity and quality controls.

Availability: To order a CD or a printed copy, or to download for free, visit the NYSDEC website at: http://www.dec.state.ny.us/website/dow/swmanual/swmanual.html. Or, for a printed copy, call Lisa Miller, Cayuga County SWCD: (315) 252-4171.

Title: **New York Contractor's Erosion and Sediment Control Field Notebook**
Useful to: Contractors
Purpose: A pocket-sized document that provides contractors with a quick, handy guide for the installation and maintenance of the erosion and sediment control practices most frequently used in construction.
Availability: Printed copies available for purchase. Print an order form from the NYSDEC website at: http://www.dec.state.ny.us/website/dow/swmanual.html. Or, call Lisa Miller at the Cayuga County Soil and Water Conservation District: (315) 252-4171.

Conferences and Workshops

There are and will be numerous conferences, workshops and other training on implementing the stormwater Phase II regulations. Check with local regional planning boards, soil and water conservation districts, business and local government organizations for sessions nearby. Also, check the DEC stormwater on-line calendar for a listing of stormwater managment training courses and workshops at: http://www.dec.state.ny.us/website/dow/calendar.html.

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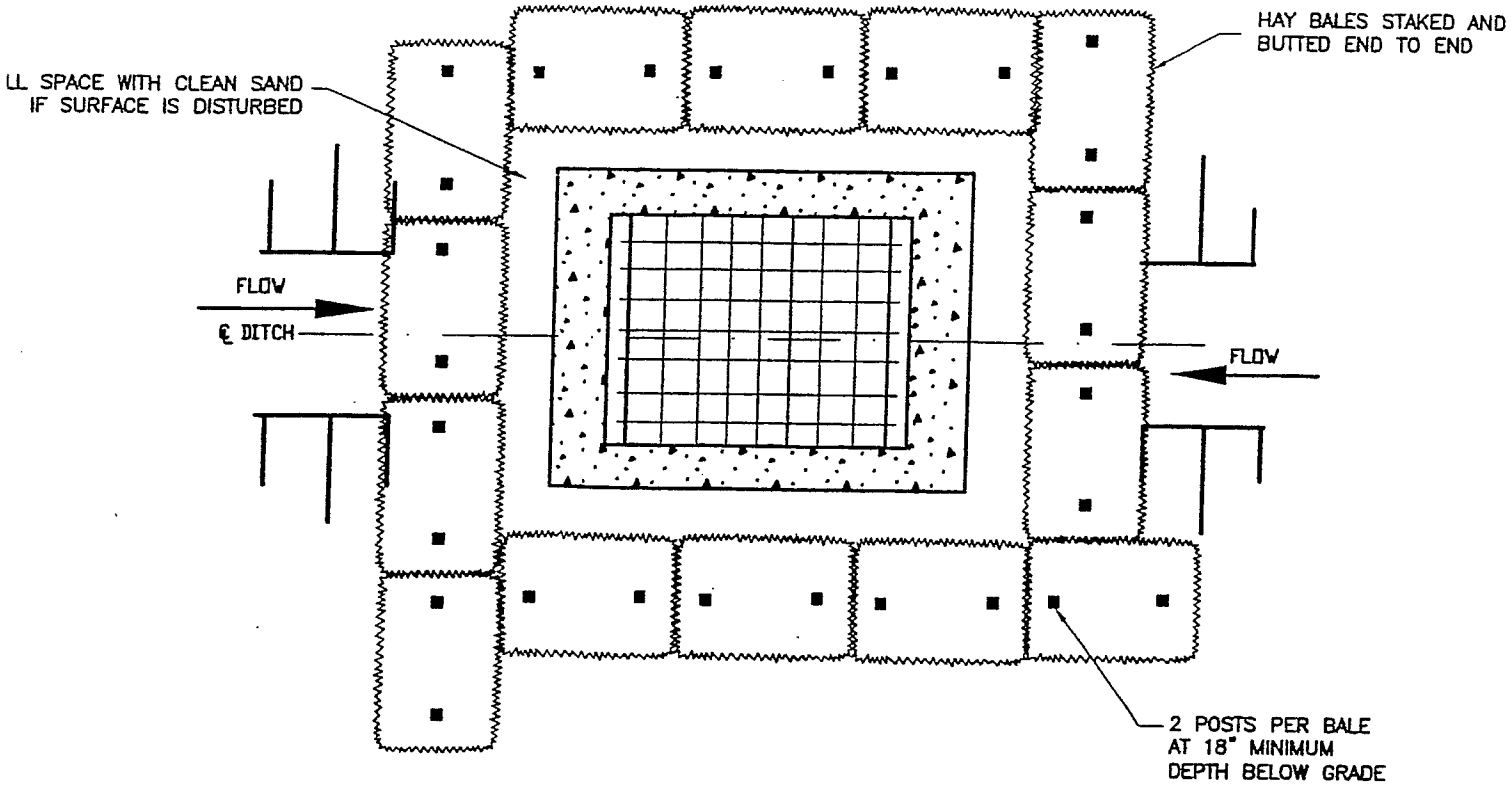


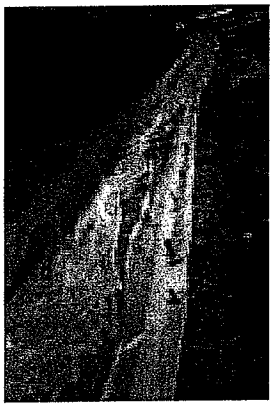
STORMWATER CATCH BASIN PROTECTION

NTS

NOTES

1. THE PRIMARY PURPOSE OF A CATCH BASIN PROTECTION IS TO PREVENT SEDIMENT FROM ENTERING DRAINAGE SYSTEM BY PONDING WATER WHICH ALLOWS SEDIMENT TO FALL OUT OF SUSPENSION.
2. THE TOP OF THE INLET PROTECTION SHALL BE SET AT THE MAXIMUM DESIRED WATER LEVEL BASED ON FIELD LOCATION AND CONDITIONS.
3. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION REACHES ONE-THIRD OF THE STRUCTURES HEIGHT.
4. BALES FOR THE DRAINAGE STRUCTURE INLET PROTECTION SHALL BE INSTALLED WITH CUT ENDS VERTICAL.

STANDARD AND SPECIFICATIONS FOR TEMPORARY SWALE



Definition

A temporary excavated drainage way.

Purpose

The purpose of a temporary swale is to prevent runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet or to intercept sediment laden water and divert it to a sediment trapping device.

Conditions Where Practice Applies

Temporary swales are constructed:

1. to divert flows from entering a disturbed area.
2. intermittently across disturbed areas to shorten overland flow distances.
3. to direct sediment laden water along the base of slopes to a trapping device.
4. to transport offsite flows across disturbed areas such as rights-of-way.

Swales collecting runoff from disturbed areas shall remain in place until the disturbed areas are permanently stabilized.

Design Criteria

See Figure 7A.2 on page 7A.5 for details.

	Swale A	Swale B
Drainage Area	<5 Ac	5-10 Ac
Bottom Width of Flow Channel	4 ft	6 ft
Depth of Flow Channel	1 ft	1 ft
Side Slopes	2:1 or flatter	2:1 or flatter
Grade	0.5% Min. 20% Max.	0.5% Min. 20% Max.

For drainage areas larger than 10 acres, refer to the Standard and Specification for Waterbars on page 7A.11.

Stabilization

Stabilization of the swale shall be completed within 7 days of installation in accordance with the appropriate standard and specifications for vegetative stabilization or stabilization with mulch as determined by the time of year. The flow channel shall be stabilized as per the following criteria:

Type of Treatment	Channel Grade[1]	Flow Channel A (<5 Ac.)	Flow Channel B (5-10 Ac)
1	0.5-3.0%	Seed & Straw Mulch	Seed & Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed and cover with Jute or Excelsior, Sod, or lined with 2 in. stone
3	5.1-8.0%	Seed and cover with Jute, Excelsior, Sod, or line with 2 in. stone	Line with 4-8 in. or stone or Recycled Concrete Equivalent[2]
4	8.1-20%	Line with 4-8 in. stone or Recycled Concrete Equivalent[2]	Engineering Design

[1] In highly erodible soils, as defined by the local approving agency, refer to the next higher slope grade for type of stabilization.

[2] Recycled Concrete Equivalent shall be concrete broken into the required size, and shall contain no steel reinforcement.

Outlet

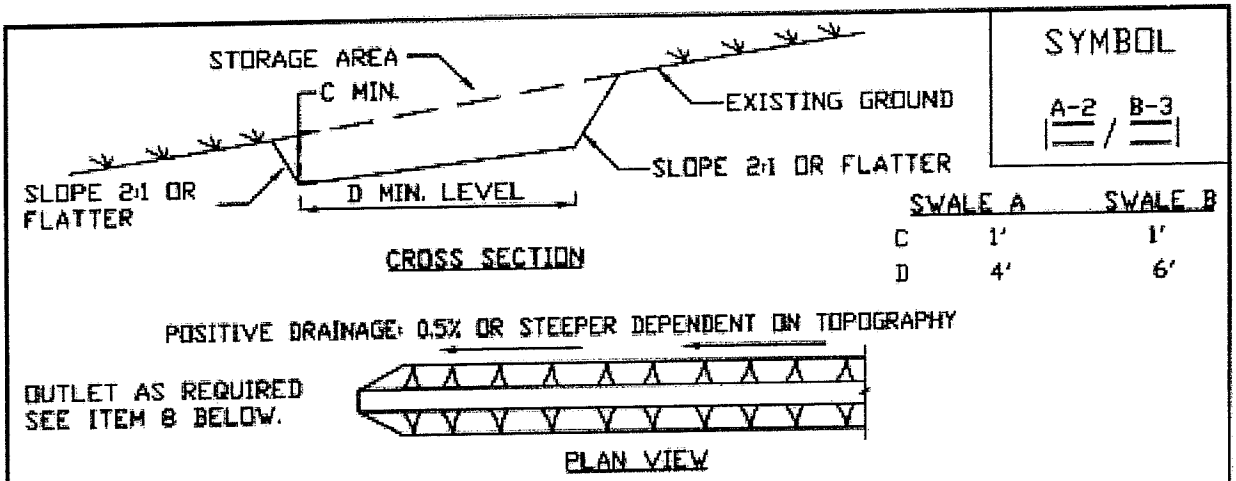
Swale shall have an outlet that functions with a minimum of erosion, and dissipates runoff velocity prior to discharge off the site.

Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin until the drainage area above the swale is adequately stabilized.

The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet condition.

If a swale is used to divert flows from entering a disturbed area, a sediment trapping device may not be needed.

Figure 7A.2
Temporary Swale



CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

TYPE OF TREATMENT	CHANNEL GRADE	A(5 AC. OR LESS)	B(5 AC. -10AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR, SOD	LINED WITH 4-8" RIP-RAP OR RECYCLED CONCRETE EQUIVALENT
4	8.1-20.%	LINED WITH 4-8" RIP-RAP	ENGINEERED DESIGN

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

TEMPORARY SWALE

STANDARD AND SPECIFICATIONS FOR STRAW BALE DIKE

Definition

A temporary barrier of straw, or similar material, used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a bale dike is to reduce runoff velocity and effect deposition of the transported sediment load. Straw bale dikes have an estimated design life of three (3) months.

Conditions Where Practice Applies

The straw bale dike is used where:

1. No other practice is feasible.
2. There is no concentration of water in a channel or other drainage way above the barrier.
3. Erosion would occur in the form of sheet erosion.
4. Length of slope above the straw bale dike does not exceed these limits.

Constructed Slope	Percent Slope	Slope Length (ft.)
2:1	50	25
3:1	33	50
4:1	25	75

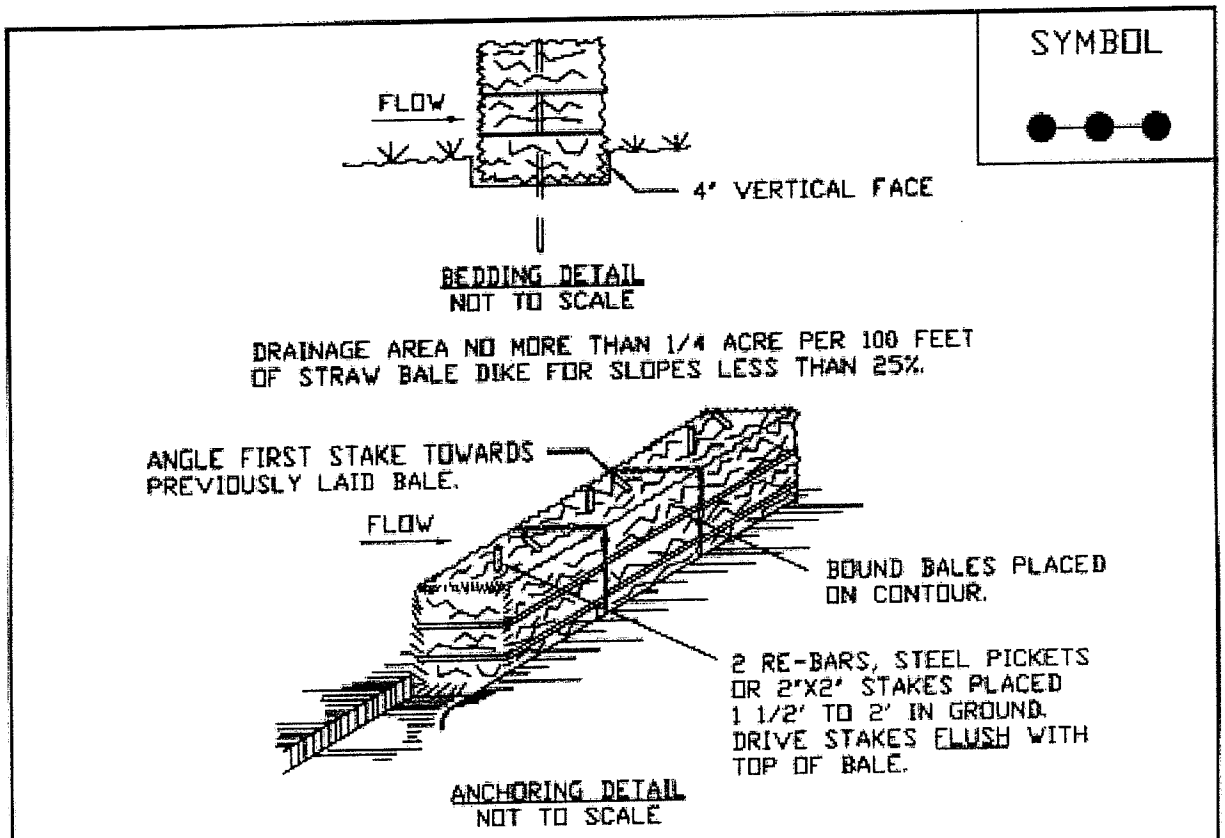
Where slope gradient changes through the drainage area, steepness refers to the steepest slope section contributing to the straw bale dike.

The practice may also be used for a single family lot if the slope is less than 15 percent. The contributing drainage areas in this instance shall be less than one acre and the length of slope above the dike shall be less than 200 feet.

Design Criteria

The above table is adequate, in general, for a one-inch rainfall event. Larger storms could cause failure of this practice. Use of this practice in sensitive areas for longer than one month should be specifically designed to store expected runoff. All bales shall be placed on the contour with cut edge of bale adhering to the ground. See Figure 7A.7 on page 7A.18 or details.

Figure 7A.7
Straw Bale Dike



CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULLNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STRAW BALE DIKE

STANDARD AND SPECIFICATIONS FOR SILT FENCE

Definition

A temporary barrier of geotextile fabric (filter cloth) used to intercept sediment laden runoff from small drainage areas of disturbed soil.

Purpose

The purpose of a silt fence is to reduce runoff velocity and effect deposition of transported sediment load. Limits imposed by ultraviolet stability of the fabric will dictate the maximum period the silt fence may be used (approximately one year).

Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope lengths contributing runoff to a silt fence placed on a slope are:

Slope Steepness	Maximum Length (ft.)
2:1	25
3:1	50
4:1	75
5:1 or flatter	100

2. Maximum drainage area for overland flow to a silt fence shall not exceed ¼ acre per 100 feet of fence; and

3. Erosion would occur in the form of sheet erosion; and

4. There is no concentration of water flowing to the barrier.

Design Criteria

Design computations are not required. All silt fences shall be placed as close to the areas as possible, but at least 10 feet from the toe of a slope to allow for maintenance and roll down. The area beyond the fence must be undisturbed or stabilized.

A detail of the silt fence shall be shown on the plan and contain the following minimum requirements:

1. The type, size, and spacing of fence posts.
2. The size of woven wire support fences.
3. The type of filter cloth used.
4. The method of anchoring the filter cloth.
5. The method of fastening the filter cloth to the fencing support.

Sensitive areas to be protected by silt fence may need to be reinforced by using heavy wire fencing for added support to prevent collapse.

Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. See Figure 7A.8 on page 7A.21 for details.

Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications (table on following page) unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance. Statewide acceptability shall depend on in-field and/or laboratory observations and evaluations.

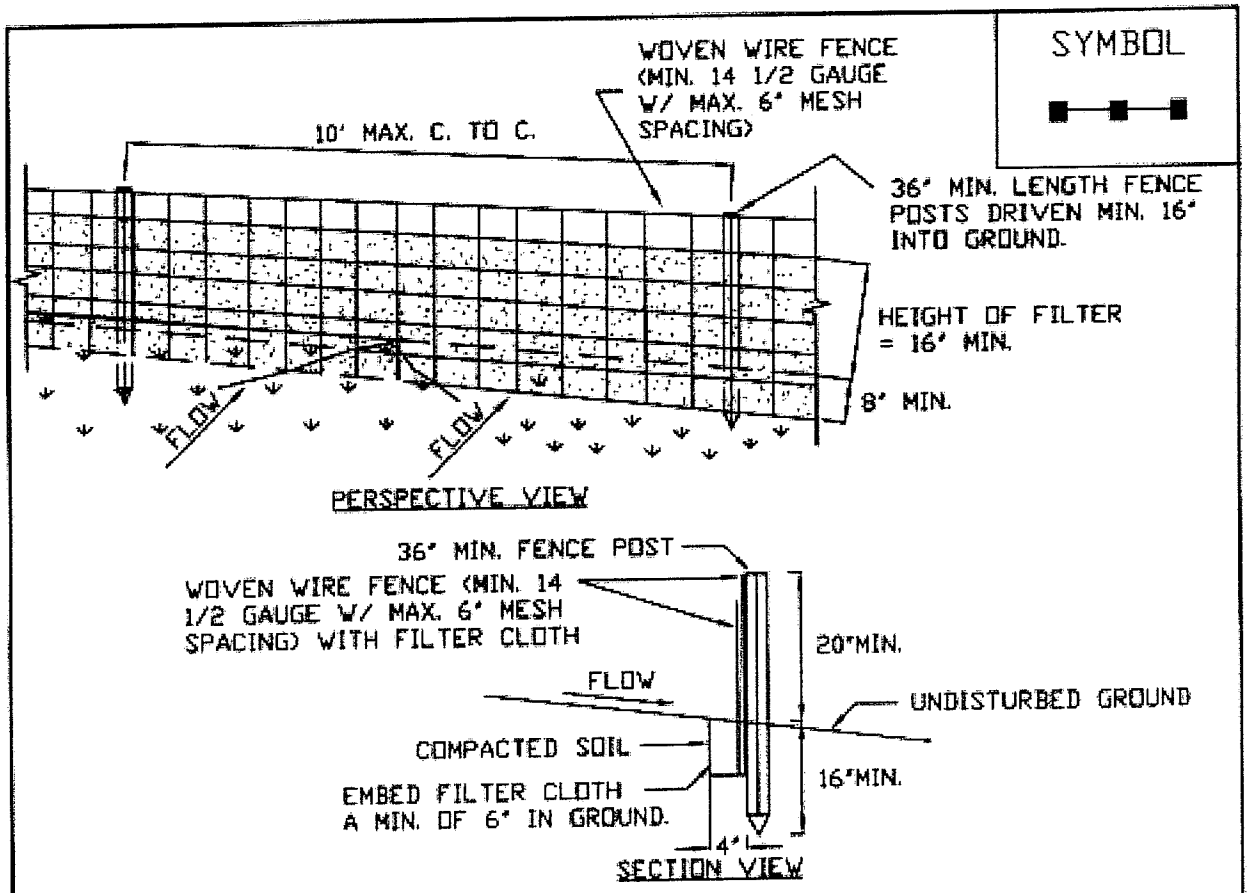
Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs)	40	ASTM D751 (modified)
Slurry Flow Rate (gal/min/sf)	0.3	
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Ultraviolet Radiation Stability (%)	90	ASTM G-26

2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.0 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot.

3. Wire Fence (for fabricated units): Wire fencing shall be a minimum 14-1/2 gage with a maximum 6 in. mesh opening, or as approved.

4. Prefabricated Units: Envirofence, or approved equal, may be used in lieu of the above method providing the unit is installed per details shown in Figure 7A.8.

Figure 7A.8
Silt Fence



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	SILT FENCE

STANDARD AND SPECIFICATIONS FOR STORM DRAIN INLET PROTECTION

Definition

A permeable barrier installed around inlets in the form of a fence, berm or excavation around an opening, thereby reducing the sediment content of sediment laden water.

Purpose

To prevent sediment laden water from entering a storm drain system through inlets.

Conditions Where Practice Applies

This practice shall be used where the drainage area to an inlet is disturbed, it is not possible to temporarily divert the storm drain outfall into a trapping device, and watertight blocking of inlets is not advisable. **It is not to be used in place of sediment trapping devices.** This may be used in conjunction with storm drain diversion to help prevent siltation of pipes installed with low slope angle.

Types of Storm Drain Inlet Practices

There are four (4) specific types of storm drain inlet protection practices that vary according to their function, location, drainage area, and availability of materials:

I. Excavated Drop Inlet Protection
II. Fabric Drop Inlet Protection
III. Stone & Block Drop Inlet Protection
IV. Curb Drop Inlet Protection

Design Criteria

Drainage Area – The drainage area for storm drain inlets shall not exceed one acre.

Type I – Excavated Drop Inlet Protection

See details for Excavated Drop Inlet Protection in Figure 7A.11 on page 7A.29.

Limit the drainage area to the inlet device to 1 acre. Excavated side slopes shall be no steeper than 2:1. The minimum depth shall be 1 foot and the maximum depth 2 feet as measured from the crest of the inlet structure. Shape the excavated basin to fit conditions with the longest dimension oriented toward the longest inflow area to provide maximum trap efficiency. The capacity of the excavated basin should be established to contain 900 cubic feet per acre of disturbed area. Weep holes, protected by fabric and stone, should be provided for draining the temporary pool.

Inspect and clean the excavated basin after every storm. Sediment should be removed when 50 percent of the storage volume is achieved This material should be incorporated into the site in a stabilized manner.

Type II – Fabric Drop Inlet Protection

See Figure 7A.12 for details on Filter Fabric Drop Inlet Protection on page 7A.30.

Limit the drainage area to 1 acre per inlet device. Land area slope immediately surrounding this device should not exceed 1 percent. The maximum height of the fabric above the inlet crest shall not exceed 1.5 feet unless reinforced.

The top of the barrier should be maintained to allow overflow to drop into the drop inlet and not bypass the inlet to unprotected lower areas. Support stakes for fabric shall be a minimum of 3 feet long, spaced a maximum 3 feet apart. They should be driven close to the inlet so any overflow drops into the inlet and not on the unprotected soil. Improved performance and sediment storage volume can be obtained by excavating the area.

Inspect the fabric barrier after each rain event and make repairs as needed. Remove sediment from the pool area as necessary with care not to undercut or damage the filter fabric. Upon stabilization of the drainage area, remove all

materials and unstable sediment and dispose of properly. Bring the adjacent area of the drop inlet to grade, smooth and compact and stabilize in the appropriate manner to the site.

If straw bales are used in lieu of filter fabric, they should be placed tight with the cut edge adhering to the ground at least 3 inches below the elevation of the drop inlet. Two anchor stakes per bale shall be driven flush to bale surface. Straw bales will be replaced every 4 months until the area is stabilized.

Type III – Stone and Block Drop Inlet Protection

See Figure 7A.13 for details on Stone and Block Drop Inlet Protection on page 7A.31.

Limit the drainage area to 1 acre at the drop inlet. The stone barrier should have a minimum height of 1 foot and a maximum height of 2 feet. Do not use mortar. The height should be limited to prevent excess ponding and bypass flow.

Recess the first course of blocks at least 2 inches below the crest opening of the storm drain for lateral support. Subsequent courses can be supported laterally if needed by placing a 2x4 inch wood stud through the block openings perpendicular to the course. The bottom row should have a few blocks oriented so flow can drain through the block to dewater the basin area.

The stone should be placed just below the top of the blocks on slopes of 2:1 or flatter. Place hardware cloth of wire mesh with ½ inch openings over all block openings to hold stone in place.

As an optional design, the concrete blocks may be omitted and the entire structure constructed of stone, ringing the outlet ("doughnut"). The stone should be kept at a 3:1 slope toward the inlet to keep it from being washed into the inlet. A level area 1 foot wide and four inches below the crest will further prevent wash. Stone on the slope toward the inlet should be at least 3 inches in size for stability and 1 inch or smaller away from the inlet to control flow rate. The elevation of the top of the stone crest must be maintained 6 inches lower than the ground elevation down slope from the inlet to ensure that all storm flows pass over the stone into the storm drain and not past the structure. Temporary diking should be used as necessary to prevent bypass flow.

The barrier should be inspected after each rain event and repairs made where needed. Remove sediment as necessary to provide for accurate storage volume for subsequent rains. Upon stabilization of contributing drainage area, remove all materials and any unstable soil and dispose of properly.

Bring the disturbed area to proper grade, smooth, compact and stabilized in a manner appropriate to the site.

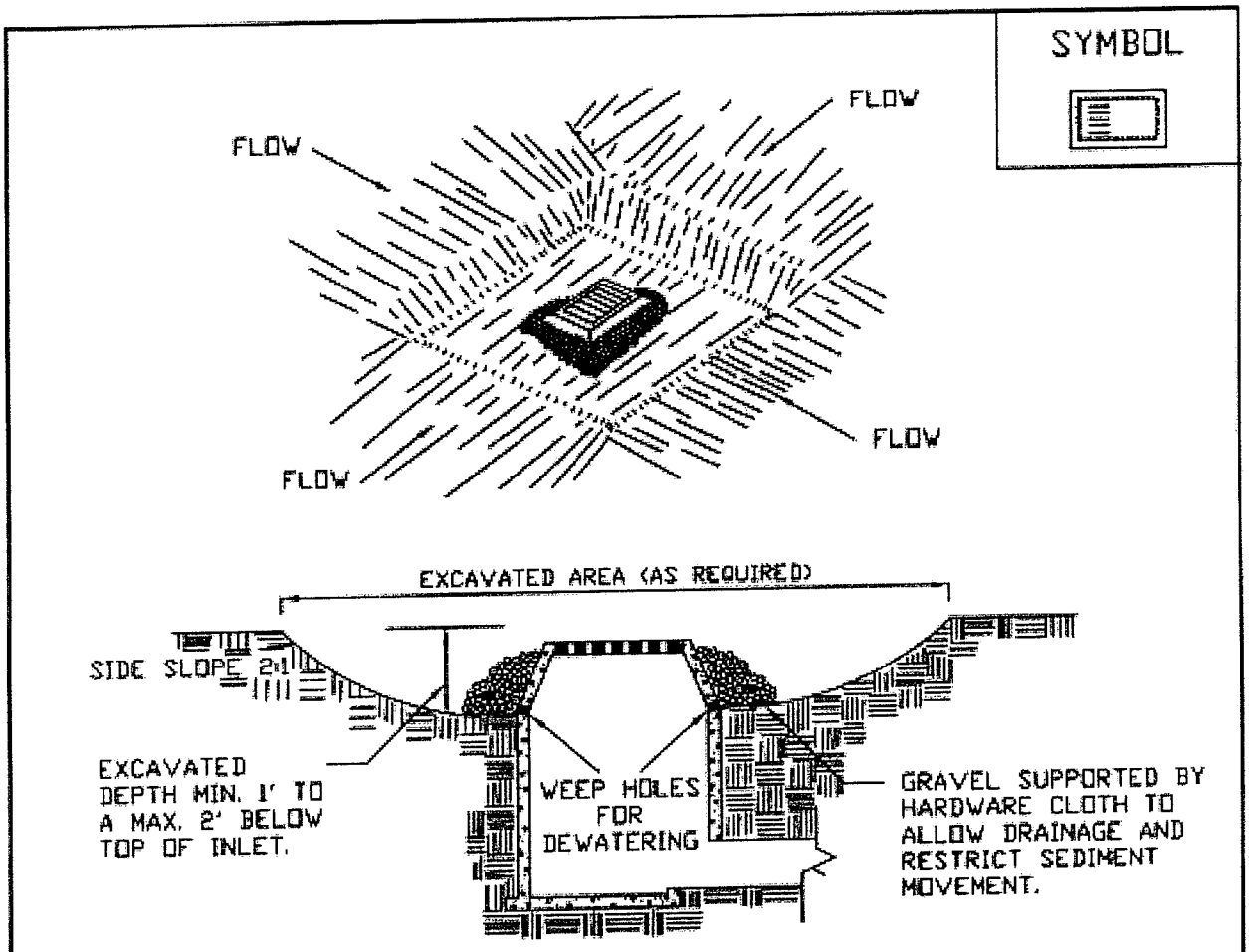
Type IV – Curb Drop Inlet Protection

See Figure 7A. 14 for details on Curb Drop Inlet Protection on page 7A.32.

The drainage area should be limited to 1 acre at the drop inlet. The wire mesh must be of sufficient strength to support the filter fabric and stone with the water fully impounded against it. Stone is to be 2 inches in size and clean. The filter fabric must be of a type approved for this purpose with an equivalent opening size (EOS) of 40-85. The protective structure will be constructed to extend beyond the inlet 2 feet in both directions. Assure that storm flow does not bypass the inlet by installing temporary dikes (such as sand bags) directing flow into the inlet.

The structure should be inspected after every storm event. Any sediment should be removed and disposed of on the site. Any stone missing should be replaced. Check materials for proper anchorage and secure as necessary.

Figure 7A.11
Excavated Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. CLEAR THE AREA OF ALL DEBRIS THAT WILL HINDER EXCAVATION.
2. GRADE APPROACH TO THE INLET UNIFORMLY AROUND THE BASIN.
3. WEEP HOLES SHALL BE PROTECTED BY GRAVEL.
4. UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA, SEAL WEEP HOLES, FILL BASIN WITH STABLE SOIL TO FINAL GRADE, COMPACT IT PROPERLY AND STABILIZE WITH PERMANENT SEEDING.

MAXIMUM DRAINAGE AREA 1 ACRE

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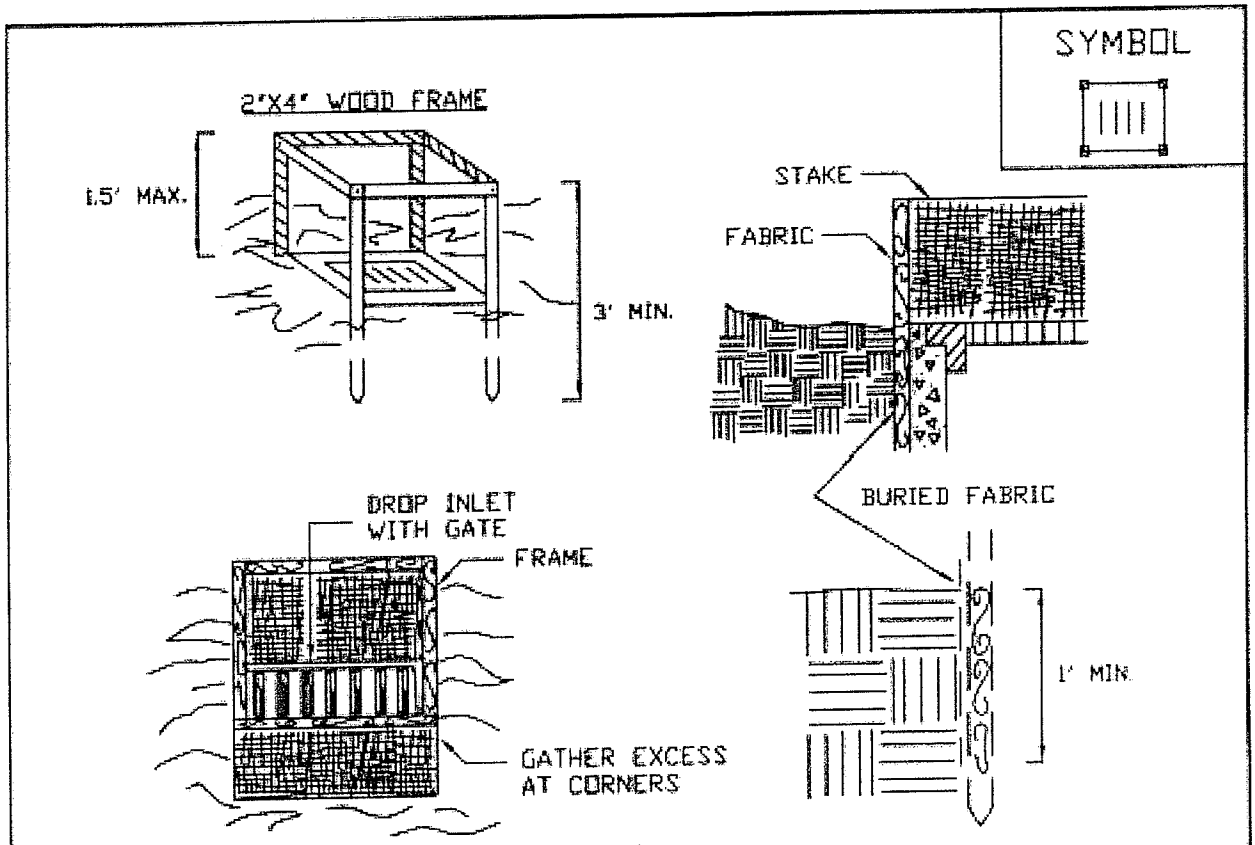
EXCAVATED DROP INLET PROTECTION

Figure 7A.12
Filter Fabric Drop Inlet Protection



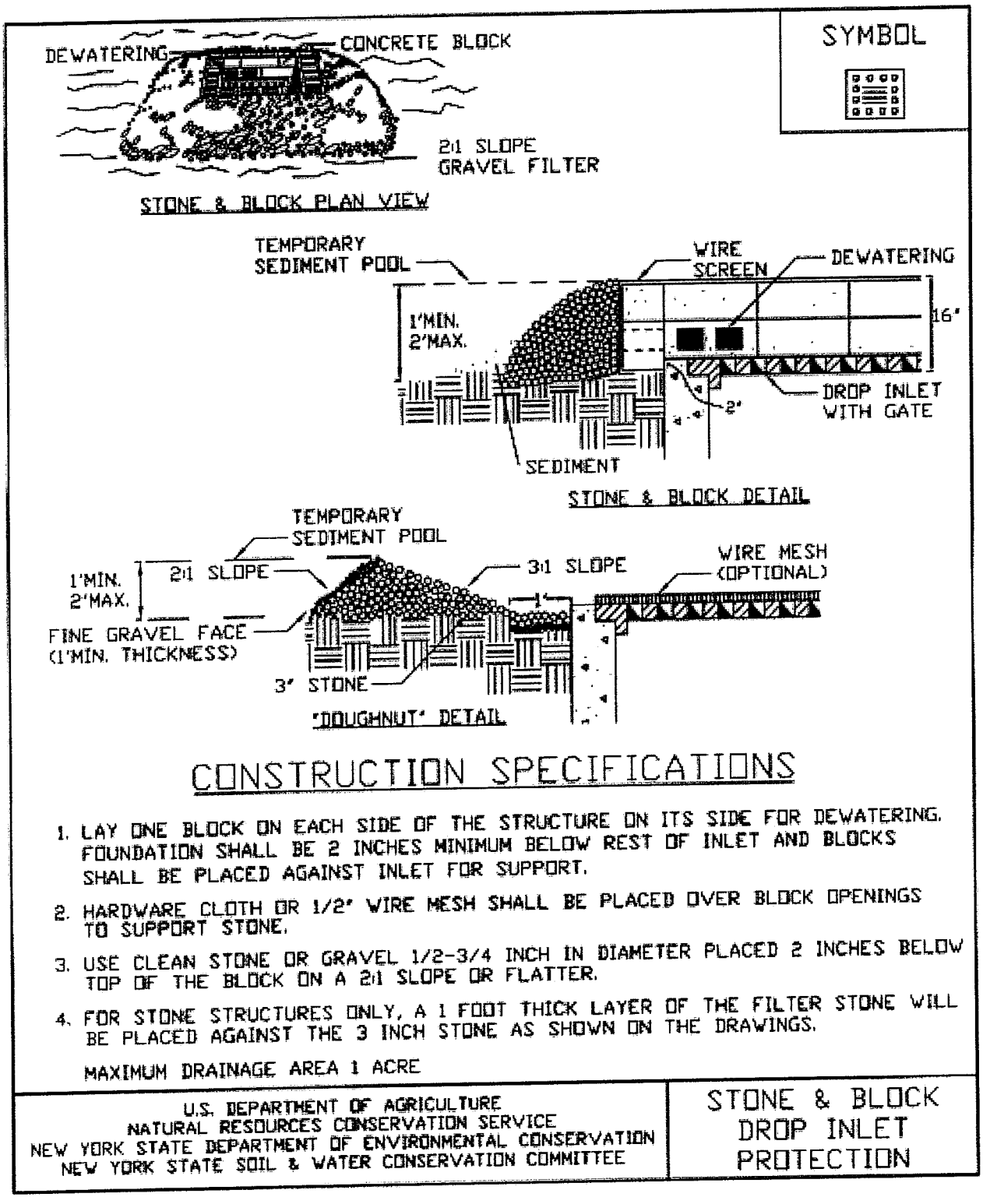
CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85. BURLAP MAY BE USED FOR SHORT TERM APPLICATIONS.
2. CUT FABRIC FROM A CONTINUOUS ROLL TO ELIMINATE JOINTS. IF JOINTS ARE NEEDED THEY WILL BE OVERLAPPED TO THE NEXT STAKE.
3. STAKE MATERIALS WILL BE STANDARD 2" x 4" WOOD OR EQUIVALENT. METAL WITH A MINIMUM LENGTH OF 3 FEET.
4. SPACE STAKES EVENLY AROUND INLET 3 FEET APART AND DRIVE A MINIMUM 18 INCHES DEEP. SPANS GREATER THAN 3 FEET MAY BE BRIDGED WITH THE USE OF WIRE MESH BEHIND THE FILTER FABRIC FOR SUPPORT.
5. FABRIC SHALL BE EMBEDDED 1 FOOT MINIMUM BELOW GROUND AND BACKFILLED. IT SHALL BE SECURELY FASTENED TO THE STAKES AND FRAME.
6. A 2" x 4" WOOD FRAME SHALL BE COMPLETED AROUND THE CREST OF THE FABRIC FOR OVER FLOW STABILITY.

MAXIMUN DRAINAGE AREA 1 ACRE

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	FILTER FABRIC DROP INLET PROTECTION

Figure 7A.13
Stone & Block Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE FOR DEWATERING. FOUNDATION SHALL BE 2 INCHES MINIMUM BELOW REST OF INLET AND BLOCKS SHALL BE PLACED AGAINST INLET FOR SUPPORT.
2. HARDWARE CLOTH OR 1/2" WIRE MESH SHALL BE PLACED OVER BLOCK OPENINGS TO SUPPORT STONE.
3. USE CLEAN STONE OR GRAVEL 1/2-3/4 INCH IN DIAMETER PLACED 2 INCHES BELOW TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER.
4. FOR STONE STRUCTURES ONLY, A 1 FOOT THICK LAYER OF THE FILTER STONE WILL BE PLACED AGAINST THE 3 INCH STONE AS SHOWN ON THE DRAWINGS.

MAXIMUM DRAINAGE AREA 1 ACRE

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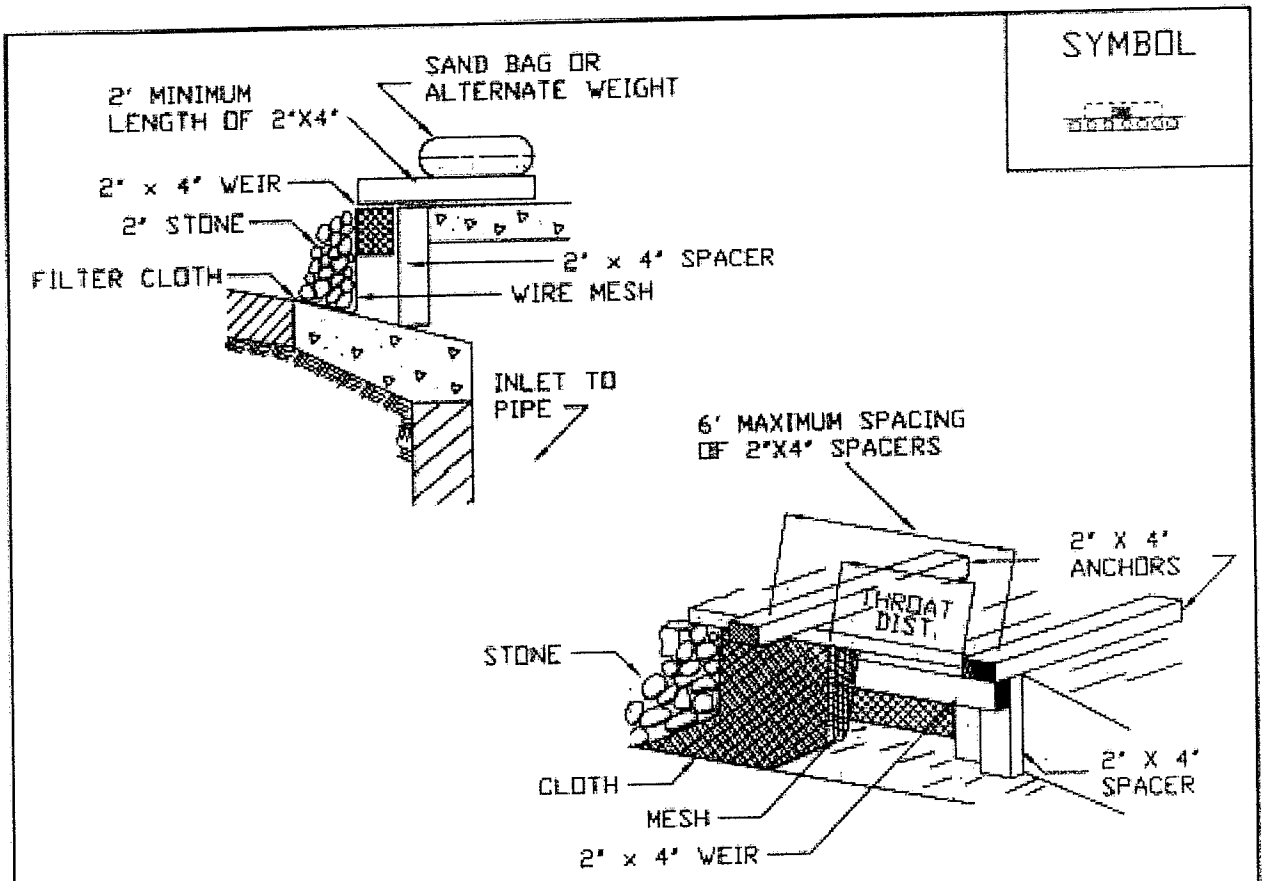
STONE & BLOCK DROP INLET PROTECTION

Figure 7A.14
Curb Drop Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. FILTER FABRIC SHALL HAVE AN EOS OF 40-85.
2. WOODEN FRAME SHALL BE CONSTRUCTED OF 2" x 4" CONSTRUCTION GRADE LUMBER.
3. WIRE MESH ACROSS THROAT SHALL BE A CONTINUOUS PIECE 30 INCH MINIMUM WIDTH WITH A LENGTH 4 FEET LONGER THAN THE THROAT. IT SHALL BE SHAPED AND SECURELY NAILED TO A 2" x 4" WEIR.
4. THE WEIR SHALL BE SECURELY NAILED TO 2" x 4" SPACERS 9 INCHES LONG SPACED NO MORE THAN 6 FEET APART.
5. THE ASSEMBLY SHALL BE PLACED AGAINST THE INLET AND SECURED BY 2" x 4" ANCHORS 2 FEET LONG EXTENDING ACROSS THE TOP OF THE INLET AND HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHTS.

MAXIMUM DRAINAGE AREA 1 ACRE

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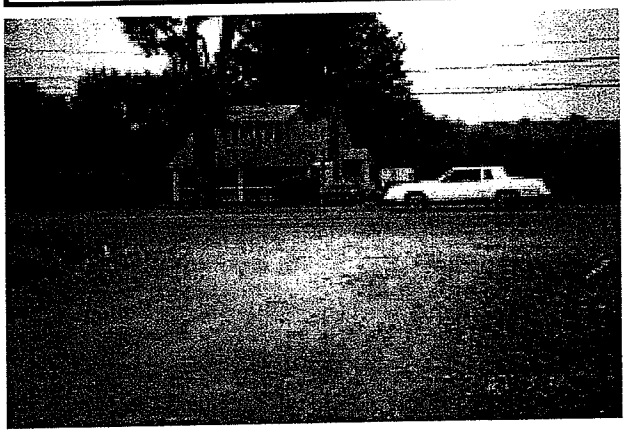
CURB DROP INLET PROTECTION

STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ENTRANCE



Definition

A stabilized pad of aggregate underlain with filter cloth located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area.

Purpose

The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

Conditions Where Practice Applies

A stabilized construction entrance shall be used at all points of construction ingress and egress.

Design Criteria

See Figure 7A.35 on page 7A.76 for details.

Aggregate Size: Use a matrix of 1" and 2" stone, or reclaimed or recycled concrete equivalent.

Thickness: Not less than six (6) inches.

Width: 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

Length: As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

Filter Cloth: To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

Criteria for Filter Cloth

The filter cloth shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties[3]	Light Duty[1] Roads Grade Subgrade	Heavy Duty[2] Haul Roads Rough Graded	Test Method
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Brust Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 modified
Equivalent Opening Size	40-80	40-80	US Std Sieve CW-02215
Aggregate Depth	6	10	--

[1]Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

[2]Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

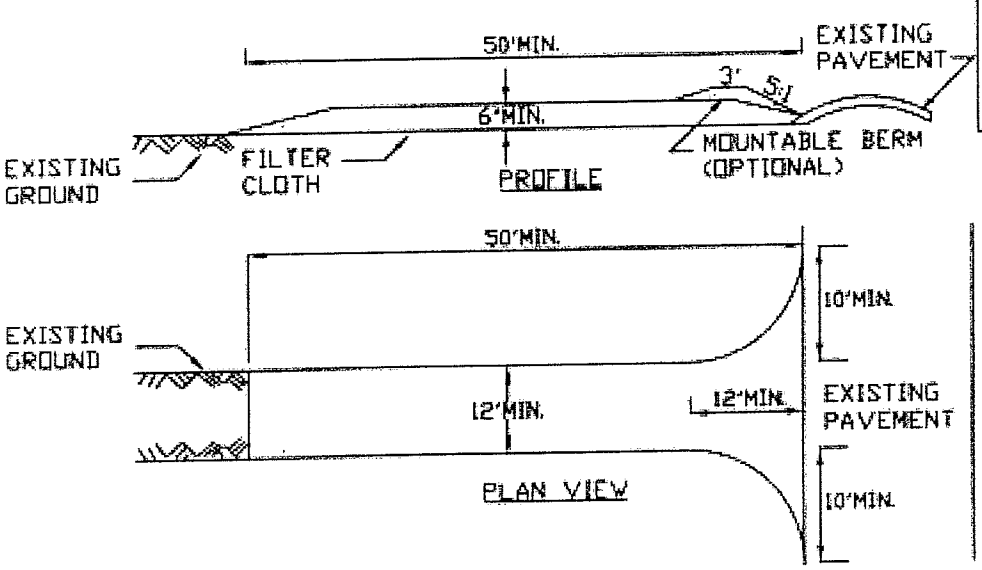
[3]Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

Maintenance

The entrance shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

Figure 7A.35
Stabilized Construction Entrance



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	STABILIZED CONSTRUCTION ENTRANCE